

States and School Systems Can Act Now to Dismantle Silos Between High School, College, and Career

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Introduction

America's secondary and postsecondary education systems are an increasingly poor match for the needs of individuals in the modern economy. K-12, college, and industry are set up as distinct steps on a linear progression from early learning to careers.

But in reality, about [one-third](#) of high school students take college classes before they graduate and [over half](#) of high school- and college-age youth are employed. At the same time, adults routinely cycle through working and learning experiences—[34 percent](#) of college students are over the age of 24 while a [fifth of adults](#) earn a training certificate conferred by industry, not college.

Rather than coming together to form a flexible, [integrated learning system](#) with easy access and transfer points, the spheres of K-12, higher education, and industry have remained siloed by policy, resources, and leadership. The result is a disjointed system that tends to favor those who have the financial means and social capital to navigate a seamless progression from high school to college to career.

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The COVID-19 pandemic brought on an [employment crisis](#) alongside [falling college enrollment rates](#), which reached historic lows at two-year institutions. Would these twin crises provide the motivation and opportunity that states, education institutions, and employers needed to make meaningful progress toward a more flexible and integrated learning system?

To find out, we interviewed 31 K-12, state, and nonprofit leaders who have been focused on redesigning education and career pathways. We asked them how their work has changed in the last year and what their priorities are as the nation emerges from the pandemic.

In these conversations, we learned about efforts to coordinate education and workforce systems that have too long been disconnected:

- As schools and workplaces went online, states built virtual college and career counseling tools that were accessible to anyone with an internet connection—not just students currently enrolled in K-12 or higher education institutions.
- The pandemic brought on widespread experimentation with the five-day school schedule, new familiarity with virtual learning models, and a desire to wait on attending college. This created opportunities to innovate on how learners connect with industry during and beyond high school.
- The converging crises in higher education and unemployment motivated an interest in revisiting ways education institutions credential learning so they can be more responsive to the fluidity in people's working and learning lives. Postsecondary institutions and states have demonstrated renewed interest in microcredentials to help people rapidly enter or re-enter the workforce. Interviewees also noted that secondary schools are more serious about designing programs and policies that award credit for skills acquired outside the classroom.

These efforts are still new and as yet unproven. States and organizations must test initiatives to ensure they yield learning benefits and result in a more equitable path to good jobs. But they hold the potential to open up opportunities for individuals who are often on their own to navigate repeated cycles of learning and work.

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However, most of the movement we observed over the past year was in higher education and industry. State leadership can play an important role in breaking down the policy, resource, and political barriers that prevent K-12 students from benefiting from education innovations. Hopefully, the experiences of the last year will serve as a flywheel, pushing states to truly transform the high school to career continuum.

Interviews used for this issue brief

We interviewed 31 leaders at state education agencies, districts, nonprofits, and workforce training organizations. We asked them how their priorities and strategies changed because of the pandemic, whether the pandemic has given them a new perspective on how to address historic opportunity gaps, and what they see as the future of career readiness.

We interviewed directors of K-12 and higher education agencies in Colorado, Tennessee, and Texas. We selected these states because they represent diverse policy landscapes, and each state has identified career readiness as a priority. We included coordinating boards and agencies overseeing two-year institutions because they are most likely to work with high schools on dual-credit programs and offer an on-ramp into technical careers. In each state, we spoke with education leaders from one school district: Durango Public Schools in Colorado, Shelby County Public Schools in Tennessee, and the San Antonio Independent School District in Texas. Nationally, we also interviewed directors at technical support and advocacy nonprofit organizations that work with K-12, industry, and opportunity youth. In total, our interviews represented six states and ten national organizations.

When the Nation Went Virtual, So Did College and Career Counseling

Virtual college and career navigation tools were one of the most ubiquitous innovations to come out of the pandemic. Youth disconnection from school, adult unemployment, and increased access to the internet spurred efforts to better connect individuals to college and career information. But they also solved a long-standing challenge: making sure students' choice of coursework is informed by both student interest and workforce demands.

Virtual college advising

In March 2020 the Texas Higher Education Coordinating Board rolled out [ADVi](#), a virtual platform that leverages artificial intelligence (AI) to provide students with 24-hour access to college counseling. The project launched ahead of schedule at the start of the pandemic to address the immediate needs of students who were suddenly disconnected from schools, teachers, and guidance counselors.

Nationally, there is only one college and career counselor for every 500 high school students, and the pandemic placed an even heavier burden on available guidance professionals. According to Jerel Booker, Assistant Commissioner for College Readiness and Success, ADVi is designed to bridge that gap.

For simple requests—say, understanding a college course requirement—users can communicate via text message with a chatbot “adviser.” However, the AI system is backed up by a team of trained advisors who can take over threads when the questions become too complex. ADVi’s on-demand appeal means students can explore options on their own time: about half of the platform’s engagement occurs outside of school hours. The tool also proactively texts students with information about college opportunities, deadlines, and financial aid, so site-based school counselors can spend less time disseminating information and more time helping youth make sense of available options.

The program serves 172,000 current Texas high school students, including 110,000 who graduated but did not matriculate into higher education in 2020. They are already planning to expand the tool to serve adults who have not attended or graduated from college.

The shift to a centralized advising tool has also helped Texas improve and refine its counseling supports. Booker said:

One of the beauties of it is that we are helping students and we’re now more able to pay attention to what students are asking—and what supports they need most.

Virtual career exploration

Both Arkansas and Indiana used federal Coronavirus Aid, Relief, and Economic Security (CARES) funds to build virtual career exploration platforms. [Arkansas](#) launched a digital platform, [Ready for Life](#), that analyzes education and workforce data. The public platform can

also be used to access education and workforce records. The state also created an [Explore Career](#) platform with information about postsecondary certificate and degree programs for 22 in-demand career clusters and posts links to scholarships and grants. Indiana's [Career Ready](#) platform hosts [interactive career "roadmaps"](#) featuring careers and training programs by region, accompanied by resources for counselors and families. The site has a portal to connect employers with skilled job seekers and portals for education providers and workforce centers to help them align curricula with industry trends.

The [SkillUp Coalition](#) formed as a direct response to the job losses stemming from the pandemic. Comprised of nonprofits, industry, and higher education institutions, the coalition launched a virtual platform with region-specific career and training information to help displaced workers—many in low-skill industries—move toward living-wage employment. The platform hosts vetted, low-cost training programs with short-term “microcredentials.” Users can apply for training scholarships through the [SkillUp Together Fund](#).

[Project Basta](#), based in New York, works with a broad network of K–16 providers, including city and state colleges, charter management organizations, and nonprofits to support first-generation students of color secure entry-level jobs that will lead to a living-wage career. When the pandemic hit, founder Sheila Sarem saw an opportunity to develop better pathways between higher education and employers for first-generation college students. The organization accelerated the launch of a virtual career readiness diagnostic, which helps users identify where they are on their career readiness journey so they can take the right next steps. The tool does not stand alone—it is designed for coaches who use the information to help job seekers. While it is aimed at college students, the diagnostic can easily be adapted for high school students and adults. As Sarem said:

The journey is very universal. If you decide tomorrow that you want to switch careers, you would ask yourself that same series of questions [as our tool does].

Expanding access to career coaching

Rhode Island is using federal CARES funds to think strategically about how to align new virtual navigation tools with career coaching. Last fall, Rhode Island Governor Gina Raimondo launched the [Governor's Coaching Corps](#) in partnership with the Governor's Workforce Board and the [Rework America Alliance](#), a national coalition of philanthropy, industry, nonprofit, and higher education institutions that formed in response to the pandemic. The Governor's Coaching Corps is creating common, quality standards for coaches who work in workforce centers, K–12 schools, nonprofits, and community colleges. By working together across sectors, coaches also learn about supportive services outside of their own organization.

The Governor's Coaching Core operates in partnership with Rhode Island's [other navigation initiatives](#), such as a [Virtual Career Center](#) for adults and [Youth Career Compass](#), a virtual hub that assists adolescents with college and career planning.

Remote Instruction, Hybrid Schedules, and Gap Years Create an Opportunity to Innovate High School Work-Based Learning

One silver lining of the pandemic’s radical disruption of schools has been freedom from rigid school-day schedules. The flexibility enabled by asynchronous learning has encouraged educators and students to explore the possibilities of work-based learning opportunities like internships and career exploration. These experiences offer numerous benefits to students, such as applying classroom concepts, building their resumes, and developing the “soft” skills that employers care about.

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Enrolling in college can be a considerable risk; students take on significant financial burden with no guarantee of employment. But without a college degree it can be difficult to advance from entry-level jobs to a living-wage career. Some educators are responding by creating potentially less risky postsecondary options that offer a more direct onramp to employment.

As a Colorado State Board of Education member put it:

You’re seeing an openness to whatever works to get young people prepared for a future where there’s a job that pays a living wage [and] pairs nicely with their interests and talents.

Helping high schools expand work-based learning using “hybrid” schedules

In the past, school systems have struggled to implement work-based learning because of barriers like transportation, scheduling, availability of industry placements, and funding. The pandemic helped to dissolve those roadblocks. Virtual learning meant that students could participate in industry career fairs, internships, and mentoring programs without needing to be physically present. And with pandemic relief grants, organizations finally had the start-up funds they needed to launch new initiatives.

During the pandemic, high schools across the country experimented with virtual learning for part or all of the week, prompting speculation that hybrid and remote high school options are here to stay. Some school systems took advantage of new flexibilities in students’ schedules to offer internships on days when students were not in real-time contact with their teachers. Still others realized that some work-based learning can happen virtually; industry partners ranging from museums to hospitals embraced virtual internships.

The San Antonio Independent School District (SAISD) supported its schools to experiment with hybrid career education. SAISD freed up student schedules for in-person internships and piloted virtual work-based learning. To support schools, the district hosted staff convenings for career and technical education teachers so they could brainstorm and exchange ideas. Johnny Vahalik, SAISD's director of College, Career, and Military Readiness, said:

[We had] a huge chart where we were monitoring every program, how many students were in it, and what were the challenges.

Vahalik used data to identify what was working across the district and what wasn't—and to offer supports where needed.

Vahalik and the district also began collaborating with new industry partners to make remote work-based learning successful. Engineering, manufacturing, and graphic design programs use software that students typically must come into the school building to use. The district worked with Amazon to redistribute software licenses and piloted a program to stream Autodesk and Adobe onto students' school-provided laptops. Vahalik is working on another pilot that will likely be offered to all of the district's high schools next year: a new virtual mentoring program that connects students with industry professionals. The district's dedicated College, Career, and Military Readiness department, and their willingness to experiment with technology, created innovative partnerships that will support high school and industry connections beyond the pandemic school year.

Work and learn opportunities

The enrollment crisis in 2020 [hit two-year colleges particularly hard](#), forcing postsecondary institutions to refocus on aligning academic programming with student interests. This prompted new thinking about ways to expand industry-connected learning models, as young people [say they value](#) college programs with a strong connection to industry.

Katie Chain, the education and workforce program manager at the H-E-B Grocery Company in Texas, is looking to expand postsecondary models that are closely tied with industry and offer paid work experience. They hope to replicate something like the [Texas Federation for Advanced Manufacturing Education](#) program (TX FAME). TX FAME students enroll part-time in St. Philips College and work part-time through a regional industry consortium. Chain explained the opportunity for participants:

At the end of two years, if they've successfully completed the program, they are highly likely to be hired on full-time with the company they trained with. If they're right out of high school, they'll be 20 years old making \$45,000 to \$50,000 a year. They've got their associate's degree. Now if they want to continue on to be an engineer, they can continue their education and work with a company that will work with their schedule.

Postsecondary models that incorporate work-based learning into the regular school day offer a glimpse of what this could look like in high school: students can take some courses remotely to open up time in the day for work-based learning. Alternatively, once students have finished the majority of their graduation requirements in 11th and 12th grades, they could enroll in college programs that incorporate work-based learning.

Making the most of the “first good job”

One model currently in development would target youth who are not immediately college bound. The initiative would place graduating youth into jobs or paid internships in public service, government, or the nonprofit sector. John White, former state superintendent of education in Louisiana who is working on this initiative, described it as a gap year in which youth get “work history and some money in their pocket so they can make an informed next step.”

The model, which is like a short-term apprenticeship for nontechnical fields, would benefit partners by helping them identify potential hires. But industry would still need to be compensated for setting aside positions and mentoring youth, which White said could come from a combination of philanthropy and state funds.

In a model like this, K-12 would not need to directly broker work-based learning with industry. Instead, a community-based *intermediary*, such as a nonprofit or government agency, would connect industry and interested youth. However, school systems would need to inform and prepare youth for the opportunities. White believes K-12 has to do more to break down opportunity gaps by actively training youth for experiences that can lead to living-wage employment. An initiative like this can help expand the array of options for graduating youth. As White said:

Leaders [and] policymakers need to find ways of blending these worlds to leverage the financial largess of the K-12 system to support the transition [of youth out of high school], rather than just support the completion of K-12.

Declining Enrollment, Surging Unemployment Lead Schools to Credit for Skills

Pandemic-related job losses disproportionately impacted workers in *low-wage industries* and those *without a college degree*. States recognized that adults needed to learn new skills or upskill quickly to re-enter the workforce. In response, our interviewees noted *increased interest* in certifications based on competency, not seat time.

Some competency-based certifications offer certification for a specific set of skills, often called “*microcredentials*” (see inset), which people can leverage to advance in their career or switch industries. Other forms of competency-based credentialing offer credit for individual courses. This includes crediting out-of-school learning experiences like internships and using prior learning assessments (PLA) that certify skills gained outside of school.

Microcredentials

Both [postsecondary institutions](#) and [industries](#) offer microcredentials that certify a student has mastered a specific technical skill or workplace competency. Unlike college degrees, microcredentials can be earned in a matter of weeks or months, meaning that an individual can quickly pivot to a new career. For example, a provider might offer a microcredential in computer adaptive design (CAD), which verifies competency in reading a blueprint and creating simple two-dimensional designs. This would signal to an employer that the individual has the skills for an entry-level drafting position.

Expanding postsecondary microcredentials

In June 2020 the Florida Department of Education used \$35 million from CARES funds to [incentivize postsecondary institutions](#) to expand enrollment in short-term credential programs and increase the number of certificates they offer. To raise awareness among adult learners, the Department of Education launched the [Get There Florida](#) initiative. Two institutions that could benefit are [Florida International University \(FIU\)](#) and [Miami Dade College](#). FIU currently offers microcredentials in fields such as policy advocacy, food service operations, and medical grant writing, but these courses do not build to a diploma. The initiative is intended to encourage FIU to design comprehensive tracks. Miami Dade College recognizes credentials that students have earned elsewhere and offers its own microcredentials, allowing students to “[stack](#)” [credentials](#) toward associate and bachelor degrees. Using CARES funds, the college could increase enrollment in these pathways.

The pandemic is prompting [renewed interest](#) in microcredentials. Microcredentials do hold promise for individuals whose circumstances make it difficult to follow a traditional trajectory. Students can even earn them while in high school, adding value to the high school diploma. But thus far, while providers [produce](#) countless microcredentials, it is not clear how much industry values them. One survey suggests that hiring managers view them as [useful supplements](#) to a degree, but not a viable replacement.

Like the [industry-based credentials](#) that many high schools now offer, states will need to regulate the microcredential market to ensure students don’t waste time and money on low-value training programs. Ideally, states will also set standards across postsecondary institutions so learners can [stack credentials](#) earned from diverse providers toward an associate or bachelor degree. States can look to Singapore for a [useful example](#). The government created [Skills Frameworks](#) for key career pathways in collaboration with industry, which include skill profiles that students can use to identify corresponding microcredentials.

Giving credit for employment and work-based learning

We also learned about renewed interest in awarding academic credit for skills acquired outside of school walls, including employment, volunteering, and work-based learning. Holly Custard, deputy director of institute partnerships and outreach at Strada Education Network noted that

the pandemic surfaced inequities that demonstrated the need to expand initiatives to credit out-of-school learning:

So many people have historically been excluded from our existing education and workforce systems. We need better ways for people to identify and communicate the skills they already have. We can do this by assessing, aligning, and endorsing skills gained both from in and outside of formal education.

When COVID first hit in the spring of 2020, the Colorado Department of Education encouraged districts to offer flexibility to the graduating class by “counting previous volunteering and jobs for course credit.” This was a response, in part, to an [increasing number of youth](#) working during the pandemic to support family incomes. The department also offered districts the option to invoke the state’s [new graduation guidelines](#) one year early to offer credit for student portfolios and performance assessments, which allows students to earn credit for skills gained outside of school.

Misti Ruthven, executive director of Student Pathways at the Colorado Department of Education reported that schools have been more willing to give credit for out-of-school and work-based activities since the pandemic. The Academy of Advanced Learning in Aurora is [using funds from Colorado’s](#) competitive innovation grant, RISE, to advance out-of-school learning and credit students for work experience. The Colorado Department of Education convened several regional [Postsecondary and Workforce Readiness Symposia](#) for districts to share and learn from each other how to effectively implement alternate crediting strategies.

Conclusion

Brought together by common challenges, K-12, higher education, and industry are working together in new ways. The pandemic blurred strict boundaries between these domains by an influx of new resources and innovations in learning and working.

But while we saw higher education and industry make significant strides to align and collaborate, we saw few innovations initiated by K-12 systems. In the next year, K-12 must be drawn into the momentum we saw in higher education and workforce organization to ensure innovations and partnerships begin at the high school level and carry through to college and workforce.

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States can engage K-12 in four ways:

1. Invest in virtual platforms that support college and career navigation. The architects of these systems should consider adaptations to ensure these tools are useful to people of any age and at any point in their education and career. Counseling resources should be made available to high school students to help them navigate these tools.

2. Incentivize bold experimentation with hybrid learning to design new models that blend school and workplace learning or connect with postsecondary institutions that are already doing this.
3. Step in to encourage and regulate high-quality, postsecondary microcredentials that stack toward associate and bachelor degrees. These microcredentials can be integrated into high school programs to add value to the high school diploma.
4. Combine policy with technical assistance to help districts credit out-of-school learning.

States have a historic opportunity to use federal stimulus funds to build the architecture for cross-cutting initiatives, whether through the American Rescue Act like [Connecticut has done](#), or by using remaining dollars from the Governor Education Relief Fund. State agencies, and governors' offices in particular, must step into leadership roles to establish policy and funding streams that bring together K-12, higher education, and workforce so the burden of navigating these systems does not fall on the individual.

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About the Center on Reinventing Public Education

CRPE is a nonpartisan research and policy analysis center at the University of Washington Bothell. We develop, test, and support bold, evidence-based, systemwide solutions to address the most urgent problems in K-12 public education across the country. Our mission is to reinvent the education delivery model, in partnership with education leaders, to prepare all American students to solve tomorrow's challenges. Since 1993 CRPE's research, analysis, and insights have informed public debates and innovative policies that enable schools to thrive. Our work is supported by multiple foundations, contracts, and the U.S. Department of Education.